MEMORANDIUM

SUBJECT: Comments on Star Lake Canal (Port Neches, TX) Draft Remedial Investigation Report

FROM: Kenneth Shewmake, USEPA Ecological Risk Assessor

TO: Phillip Allen, USEPA Remedial Project Manager

DATE: April 7, 2006

I have reviewed the sections of the Draft Remedial Investigation report that are relevant to Ecological Risk Assessment and I have the following comments.

Section 1, Introduction

1. Page 1-7, Section 1.4.4: This section refers to Exhibits that I could not locate in this document.
2. Page 1-6, Figure 1-21: How was the area described as "area of potential concern" in figure 1-21 determined? It appears in this figure that the area is connected to other waterways. Is there a reason to believe that significant amounts of contamination could not have been transported to other areas? Why isn't the area where Star Lake Canal joins the Neches River included? What are the boundaries of this site? All of this information needs to be presented in this document.
3. The picture in Figure 1-21 is good, but we need additional close up maps showing details like where dredged sediments were deposited, where the solid waste landfill is, tributaries, outfalls, other water bodies and property lines.
4. Page 1-7, Section 1.4.5: It is not clear from the background information and site description if all of the locations where dredged sediments were placed on the banks of the canals are known. If all of these locations are not known then locating these dredged sediments, and runoff from them should be one of the goals of this remedial investigation.

Section 3, Screening-Level Ecological Risk Assessment

1. Section 3.5 of the work plan needs to be re-written, removing all references to ARARs, and should instead should focus on establishing the screening benchmarks that will be used. This section as currently written implies that ARARs and screening benchmarks are the same thing. ARARs can be used as benchmarks but ARARs are regulations and benchmarks are not. ARARs are considered when establishing remedial goals but are not part of the ERA.
2. The references to ARARs on pages 1-10,2-2, 3-3 also should be modified.
3. When establishing a hierarchy for the selection of ecological benchmarks, Texas chronic WQS should be considered before NAWQC

4. Page 3-3,Section 3.3: The section on selection of COPEC's should also state that all PAHs detected would be retained if any one detected PAH exceeds a screening level.
5. As this site is in Texas the easiest way to establish benchmarks would be to follow the TCEQ guidance (RG-263 section 3.5), because it sites all of the references used in the draft RI section 3.5 and follows the same general outline used to establish benchmarks. It would also make it easier to compile and check the values that are used.
5. Page 3-6, Section 3.4.1: There should be more supporting documentation in order to justify the decision not to classify endangered species as a ROC. The preferred documentation is a statement from US Fish and Wildlife Service.
6. Page 3-11, Figure 3-2: In the conceptual site model the path from bank soil to shorebirds, waterfowl, and mammals is shown as incomplete or potentially complete. This pathway would probably be complete unless there is a site-specific reason that exposure is not possible. Please explain why these pathways are shown as incomplete.
7. Page 3-12, Section 3.6.1: Describing the area affected by dredged sediments as "comparatively small compared to the overall size of the site" is not sufficient to show that there is no pathway from the contaminants to mammalian receptors. The site is large and comparatively small could mean anything.
8. On page 3-12, section 3.6.1 it states that, for this risk assessment, the use of the word sediment will be limited to include only substrates that are permanently submerged and that substrates that are intermittently submerged will be classified as wetland soil. If wetland soil is going to be evaluated separately then how is it going to be evaluated (soil, sediment or both)? It may be appropriate to evaluate terrestrial receptors against soil and aquatic receptors against sediment. This all depends on how frequently the area is inundated. The methods used to evaluate wetland exposure need to be explained.

Section 6, the sampling and analysis plan

1. This sampling and analysis plan doesn't seem adequate to characterize the dredged sediments placed on the bank of the Jefferson canal or the runoff from these sediments. From Figure 6.1 it does not look as if any soil sampling is going to occur near Jefferson Canal.
2. It is difficult to evaluate the sampling plan without more detailed maps and pictures. Figure 6.1 has blurred text in both the electronic and print copies. Larger higher resolution maps should be provided. A map with landmarks, roads, and potential sources of contamination labeled should be provided. It would also be good to have pictures with and without the color enhancement.
3. Page 6-1, Section 6.1.2: The description of the DQO process in this section is not adequate. While the DQO process for a SLERA is abbreviated, the information used to determine the number of samples, and the questions that are being answered by this study should be presented in greater detail.
4. Page 6-3, Section 6.2.2: The use of the term wetland soil to describe soil samples from dredged material placed on the banks of the canal is not used consistently throughout these documents. In the CSM (fig 3-2) and food web (fig 3-3) this soil

is referred to as bank soil. Unless this soil is part of a wetland or intermittently submerged then it should be referred to as bank soil throughout the entire document. If all of this soil is going to be evaluated as wetland soil and none of the samples are considered bank soil then the CSM, food web, and all references to bank soil in the rest of the document should be modified to reflect this.

5. This plan does not include any soil sampling from the banks of the canals except in areas where contaminated sediment has been deposited. This sampling plan should include soil sampling on the banks of the canals in areas where elevated water levels could have carried contamination.
6. It would be easier to develop a sampling plan, and describe this site if the site were broken into multiple AOC's with similar characteristics. For example wetlands, canals, and contaminated bank soil. This is a large site to assess as a single area of concern.
7. Page 6-2,Section 6.2.1.3: This section needs to be expanded to cover patterns of drainage from contaminated bank soil and discuss any water bodies connected to the canals. It should also discuss flooding and how tidal flow affects currents in the area. The description of water flow should be adequate to locate all of the areas potentially affected by hydrologic transport of contaminants.
8. Page6-6, Section 6.4: If the sediment is collected in the same location as surface water, and water is collected mid channel then is it possible that the samples could be collected from an area that has been dredged? If dredging is occurring in the canals then this should be considered when selecting locations for sediment sampling. We need to know to location and frequency of dredging to ensure that this sampling plan is adequate.
9. The sampling plan should discuss the collection of samples to be used as a background and describe the rational for selecting that location as a background.